

REMARKS

Reconsideration of this application, as amended, is requested. Claims 1, 3, 4 and 6-8 remain in the application and under consideration. Claims 2 and 5 have been cancelled. Claims 9-17 are directed to non-elected subject matter and have been withdrawn from consideration.

Claim 1 is the only independent claim in the application and has been amended to incorporate the limitations of cancelled claims 2 and 5.

Claims 1-3 were rejected under 35 USC 103(a) as being obvious over Kasai, U.S. Patent No. 5,033,476 in view of Wermund, U.S. Patent No. 5,472,542 and Knowles, U.S. Patent No. 2,965,932. Claims 5 and 6 were rejected under 35 USC 103(a) as being obvious over these same references considered further in view of Newby et al., U.S. Patent No. 6,017,317. It is believed that the Examiner would apply this combination of four references against amended claim 1.

Kasai was cited for showing an evacuated blood collection tube sealed at one end with a seal that has an elastomeric portion and a sheet of sealing material.

Wermund was cited for showing a two-part lid that can be releasably engaged with a cup. The Wermund specification explains that the cup and the lid desirably are formed from a relatively rigid material to facilitate the repeated removal and reconnection of the lid relative to the cup. However, the disclosure explains that the rigid material that enables repeated opening and closing of the lid is not well suited to achieving a seal between the closure and the lid. Accordingly, Wermund provides a two-part lid with a base 32 formed from a material that will permit repeated opening and closing and a sealing member 34 that will overlie the top edge of the cup to provide better sealing. In

one embodiment, Wermund suggests that the polypropylene sealing material can be placed in the mold in which the more rigid base is formed. The plastic then "may be injected into the mold to form the base 32." Thus, Wermund teaches a process where preformed sealing members formed from one plastic are placed individually in molds for receiving a second more rigid plastic.

Knowles shows a process for molding a cap for a container so that the cap has a central transparent window and a rim surrounding the window. The window is a tough transparent thermoplastic material provided in sheet form. A sheet of the transparent plastic is advanced into a mold and apparently is squeezed between male and female die members. A second thermoplastic material then is urged between the male and female die members to mold the rim of the cap. The assembly of the strip of transparent film with rims molded thereon then is advanced to a blanking device that cuts the cap assembly from the strip. The rim of the cap assembly then can be snapped into engagement over the open top of a container.

Newby et al. merely was cited for showing a metal foil between layers of PET and adhesive.

Nothing in the references relied upon in the office action suggests their hypothetical combination. In this regard, the references come from two vastly different areas of technology. Kasai and Newby et al. are drawn from related areas of producing evacuated tubes. However, neither of these references suggests an efficient process for making the closure assembly shown herein. Wermund relates to a closure for a cottage cheese container, and Knowles appears to relate to a similar type container. Both

Wermund and Knowles show container lids formed from two compatible types of thermoplastic materials.

None of the references suggest molding substantially cylindrical elastomeric stoppers directly onto substantially planar sections of a sheet of sealing material that has been moved to a mold for forming the closure. The only reference that shows advancing a sheet material through a mold is Knowles. In Knowles, the sheet material is a tough transparent thermoplastic material that necessarily is deformed in the molding process by the apparatus shown in FIG. 3 of Knowles. The male and female dies of Knowles would cause substantial deformation of the transparent thermoplastic that may be necessary to hold the tough transparent thermoplastic material of Knowles to the thermoplastic rim of the Knowles cap. However, such deformation could damage the metal foil of the sheet of sealing material defined in amended claim 1.

The references also do not suggest the very efficient process that includes cutting the sheet into selected circular shape surrounding portions of each said stopper on said sheet such that "an annular area of said second outer layer of said sealing material projects outwardly from said stopper".

Claim 4 was rejected under 35 USC 103(a) as being obvious over Kasai, Wermund and Knowles, as applied to claim 1, and considered further in view of Dawson, U.S. Patent No. 4,445,836. The Examiner acknowledged that the three primary references did not show winding the seals on an roll before cutting them from the sealing material. Dawson was cited in an effort to address this admitted deficiency of the primary references. The portion of Dawson that was considered relevant by the Examiner is a brief mention in the Abstract to molding items in a string or chain such that the molded items are

connected by molded scrap connectors. The string of molded items and molded scrap connectors are "wound periodically into a coil." The specification explains, however, that the process relates to "molding an item in a mold such that the item has an integral trailing connector." (Col. 3, lines 29-31) The Dawson reference does not overcome the deficiencies of the three primary references described above. In particular, the hypothetical combination of Kasai, Wermund and Knowles with Dawson does not suggest providing a sheet of laminated sealing material having a first outer layer formed from a thermoplastic material, an intermediate layer of metallic foil adjacent said first outer layer and a second outer layer; moving said sheet into a molding apparatus, molding substantially cylindrical elastomeric stoppers onto substantially planar sections of said second outer layer of said sheet and then "winding said strip of sealing material and said stoppers thereon onto a take up roll" prior to forming the cutting steps set forth in amended claim 1 and 4. Accordingly, claim 4 is not taught or suggested by Kasai, Wermund, Knowles and Dawson.

The rejection of claims 5 and 6 was considered above in the remarks pertaining to the rejection of amended claim 1.

Claim 7 was rejected under 35 USC 103(a) as being obvious over Kasai, Wermund and Knowles as applied to claim 1 and considered further in view of Miller. The Examiner acknowledged that the primary references do not suggest an outer cap with a skirt that extends down the tube and having an annular shoulder extending inwardly with an aperture at the center. The Examiner turned to the Miller reference in an effort to overcome this admitted deficiency of the primary references.

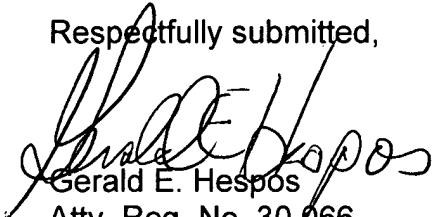
The Miller reference is assigned to the assignee of the subject invention and the cap shown in Miller is relevant to the cap recited in amended claim 7. However, the Miller reference does not overcome the deficiencies of the primary references with respect to amended claim 1 and as set forth above. In particular, it is not merely the structure of the cap that provides the efficiencies of the method recited in claim 7. With respect to amended claim 7, the references do not suggest adhering the layer of thermoplastic material of the seal to the bottom surface of the annular shoulder so that the layer of polyethylene terephthalate faces downwardly away from the annular shoulder, and so that the stopper is spaced in from the skirt. This efficient process ensures that the combination of the sheet of sealing material and the elastomeric stoppers is adhered more securely to the cap than any subsequent attachment of the layer of polyethylene terephthalate to a tube. Additionally, this unique method achieves a closure that provides an excellent moisture barrier. All of this is achieved with the above-described efficient molding of the cylindrical elastomeric stoppers onto the planar sections laminated sheets of sealing material.

Claim 8 was rejected under 35 USC 103(a) as being obvious over Kasai, Wermund, Knowles and Miller as applied to claim 7 and considered further in view of Yamazaki et al. The Yamazaki et al. reference was cited for the teaching of a rubber stopper on the top side of a seal. However, Yamazaki et al. does not overcome the deficiencies of the four primary references as described above.

In view of the preceding amendments and remarks, it is submitted that the amended claims remaining in the application are directed to patentable subject matter, and

allowance is solicited. The Examiner is urged to contact applicant's attorney at the number below to expedite the prosecution of this application.

Respectfully submitted,



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